The rationale underlying the program structure was that health resources allocated by representatives of a cross-section of the community would provide better health services at less cost than those allocated only by providers. In seeking to provide the best quality care for their patients, physicians and other medical professionals do not necessarily consider the total costs or the distribution of services. Planning agencies are expected to consider these factors, which are not always relevant to decisions made independently by providers. For example, planning may encourage development of services in rural or other needy areas.

## Overinvestment

Planning agencies were given authority to review hospital investment because it is widely believed that, without restrictions, hospitals will add too many beds, purchase too much equipment, and provide too many services. This overinvestment is considered to be a major source of hospital cost inflation, not only because of the original capital costs, but also because of the operating costs associated with excess capacity and the additional use of services induced by the presence of these facilities.

Health planners define overinvestment as resources expended on health services that are not needed--that is, do not contribute to improving the health of the community. Because of the difficulties in measuring the need for health services, overinvestment is usually defined in terms of capacity in excess of the amount demanded--low hospital occupancy rates, for example.[2]

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2. The need for health services differs from what is used for several reasons, however. First, needed services may not be available. This can be caused by the location of the services, or because discrimination prevents some groups from using them. Second, the use of services also depends upon the population's perception of what services they require to stay healthy, and how much they are able and willing to pay for such services. The use of services can be greater than needed if perceptions of need are too high and there are few financial or other barriers to access. Use can be less than needed if the reverse is true.

Some hospital resources are simply not being used. Occupancy rates are often much lower than necessary to meet peak demand.[3] Services other than beds also often suffer from excess capacity. Underuse of specialized facilities, such as those for radiation treatment and open-heart surgery, sometimes occur when several hospitals in an area have the same facilities.

One commonly cited cause of hospital overinvestment is third-party payment. Extensive coverage for hospital services by public and private insurance has created a situation in which patients and their physicians have little concern for the costs of care. The typical insurance policy pays the entire cost of hospital room and board and ancillary services. In the aggregate, only 9 percent of hospital costs were paid out-of-pocket by patients in 1980.[4] Since hospitals encounter little resistance to increased prices, incentives to hold down costs are significantly reduced. This tends to protect hospitals from the penalties of excess capacity normally borne by businesses. With extensive third-party payments, competition for patients is often based on amenities rather than price, which in turn leads to increased investment.

Competition by hospitals for physicians may also be a major cause of overinvestment. Because physicians making decisions on behalf of their patients create the demand for hospital services, hospitals compete for patients indirectly by competing for physicians. Physicians, for the most part, are not hospital employees, so rather than offering high salaries, hospitals must attract physicians by providing advanced technology and modern facilities, regardless of how many other facilities in the area already offer them.

The availability of federally subsidized financing also contributes to the problem of overinvestment. About half of all hospital construction is financed by tax-exempt bonds. In the past, direct federal subsidy programs also contributed to the growth in

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3. The occupancy rate is defined as the ratio of the number of inpatients per day to the average number of available beds. See Congressional Budget Office, "Federal Strategies for Closing Excess Hospital Beds" (May 1979, unpublished).

4. Robert M. Gibson and Daniel R. Waldo, "National Health Expenditures, 1980," Health Care Financing Review (September 1981), Table 6A, p. 42.

hospital construction, but this type of funding has been significantly reduced in recent years.

Excess investment increases hospital costs in two ways. First, there are fixed costs associated with idle capacity. For example, an unused hospital bed is estimated to generate between 20 and 65 percent of the costs of a filled bed.[5] The fixed costs of equipment might be even higher, since personnel who operate the equipment are often not capable of performing other functions, even when they are not occupied full time.

The second source of increased costs--possibly larger than the first--are those associated with the so-called "Roemer effect," in which an increase in hospital beds in an area increases hospital utilization rates.[6] Empirical estimates of this effect indicate that a 10 percent increase in beds per capita increases rates of hospital use by about 4 percent.[7] Similar phenomena may exist for major pieces of equipment, although this has not been substantiated.

## Mix of Investments

In addition to reducing investment, health planning is expected to affect the types of investments made by hospitals. Planning agencies work with providers to develop needed services, and present evidence of need to those who finance service development. In addition, the link between planning and CON review may lead hospitals to shift to those projects that conform to planning goals, because they are more likely to be approved.

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5. Joseph Lipscomb, Ira E. Raskin, and Joseph Eichenholz, "The Use of Marginal Cost Estimates in Hospital Cost-Containment Policy," in Michael Zubkoff, Ira E. Raskin, Ruth S. Hanft, eds., Hospital Cost Containment: Selected Notes for Future Policy (New York: Milbank Memorial Fund, 1978), p. 531. These are estimates of the short-run ratio of marginal costs to average costs.

6. Milton Roemer and Max Shain, Hospital Utilization Under Insurance (Chicago: American Hospital Association, 1959).

7. Paul B. Ginsburg and Daniel M. Koretz, "Bed Availability and Hospital Utilization: Estimates of the 'Roemer Effect'" (August 1981, unpublished).

## Role of Consumers

An important element of the planning program is to increase the involvement of health-care consumers--including employers who purchase group insurance--in shaping local health care services. Consumers are already indirectly involved in making allocation decisions when they choose to purchase medical care, but specific decisions are usually transferred to physicians because consumers lack medical expertise. One goal of planning is to provide technical information to consumer representatives through assistance from a professional planning staff.

In general, the priorities of consumer participants in planning are expected to be different than those of providers. In addition to concern for cost containment, consumers are often interested in improving quality and access to care by expanding services such as ambulatory care, preventive medicine, emergency care, and health education. Consumers also wish to locate services near those who need them, and often desire to address issues related to environmental health.

In addition to giving consumers a more direct role in allocating health resources, the forum provided by planning is meant to encourage coordination among providers of health services. For example, agreements for mergers or shared services among hospitals may be arranged, possibly leading to lower costs. Although these arrangements could come about without planning agencies, the process creates greater opportunity and can induce community pressure for such changes.

## CHAPTER II. DESCRIPTION OF THE HEALTH PLANNING PROGRAM

This chapter describes the health planning program authorized by the National Health Planning and Resources Development Act of 1974. The development of the federal role in health planning and programs that preceded the 1974 act are discussed in Appendix A.

### NATIONAL HEALTH PRIORITIES

The National Health Planning and Resources Development Act established a number of national health priorities, encompassing a broad range of health issues. These were to serve as the basis for health planning agency goals to provide care to the underserved, encourage institutions to share and coordinate services, develop alternative systems of care, promote quality care, encourage programs of preventive care and health education, and assure the availability of appropriate mental health services.

Of the six goals added in the 1979 amendments, three reflected an increased emphasis on cost-containment issues. These were the discontinuance of unneeded or duplicative services and facilities; increased efficiency and more appropriate use of resources and cost-saving technology; and strengthening competition to promote quality, access, and cost-effectiveness. The other three new priorities were intended to improve access to appropriate mental health services.

### THE HEALTH PLANNING SYSTEM

The federal planning program requires and funds local and state planning agencies.[1] Health Systems Agencies (HSAs) are the local area planning organizations. Composed of representatives of a cross section of their communities, these agencies develop long-range plans for the health needs of their areas, and direct resources in accordance with the plans. At the state level, the

1. In addition, the act funds three regional Centers for Health Planning to provide technical assistance to local and state planning agencies.



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State Health Planning and Development Agencies (SHPDAs) develop state health plans based on those of the HSAs. Through certificate of need (CON) review, planning agencies act to limit investment in duplicate facilities and other unneeded investments in accordance with the local and state health plans. Under federal requirements, final CON approval is granted by the state agencies, which must take into account any recommendations of the HSAs.

## Health Systems Agencies

A primary responsibility of HSAs is to gather data; analyze health statuses, health needs, available resources, and use of health services; and design comprehensive health plans that outline a strategy to improve the quality and distribution of health care.[2] The plans, which cover a five-year period, must be updated every three years, and must comply with requirements of the 1974 act to address a broad range of national health priorities and to provide detailed objectives for a number of health services. In addition, annual strategies for implementation of the health plans are required.

The usefulness of health plans in guiding planning agency actions varies among agencies, and has not been systematically studied. Some plans have provided objectives that have been the basis for further actions, either in project review or in encouraging the development of needed health services.[3] On the other hand,

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2. There are currently 203 HSAs, covering geographic areas meant to coincide with health-service delivery areas. Most HSAs are nonprofit corporations. There are 12 HSAs that encompass an entire state, and 15 that include areas from more than one state. Some HSAs may be forced to close as a result of funding cuts and the 1981 reconciliation act which allows the Secretary of Health and Human Services to grant governors the authority to abolish HSAs in their states, if the states will meet the purposes of the 1974 act without the HSAs. Five states have recently received authority to terminate 27 HSAs.

3. For example, one HSA, through the process of assessing the status of community health, learned that infant mortality in one city was much higher than the national average. Further study revealed that 72 percent of the infants that died were born to mothers from six low-income neighborhoods. This in-

(Continued)

some plans are not useful as a basis for further planning agency action. Some contain objectives that are not specific enough to guide project review or other agency activities--encourage consumers and providers to contain health-care costs, for example. Another criticism is that the broad scope of the plans sometimes includes issues over which the planners can have no direct influence, such as reducing the incidence of death from cancer.[4] To some extent, however, this broad scope is mandated by federal planning requirements to address wide-ranging national health priorities and to consider health resources, service delivery, health education, and other aspects of the health system.

It is generally acknowledged that most health plans have improved over time. As a result of more experienced staffs and boards, most agencies' plans are better than their earlier versions. In the 1981 grant cycle, federal reviewers attached conditions to grant awards for only six local and two state health plans.[5] These conditions are official federal suggestions for improvement.

HSA Activities. In addition to preparing health plans and making recommendations to state planning agencies for CON applications, HSAs engage in a broad range of activities.[6] Planners

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3. (continued)
formation led to institution of an advisory committee to study the availability of maternal health services and develop methods for increasing the use of prenatal and early infant care. See Health Systems Agency of North Central Connecticut, "Local Health Planning: It Works in North Central Connecticut" (March 1981).

4. General Accounting Office, Health Systems Plans: A Poor Framework for Promoting Health-Care Improvements (June 22, 1981).

5. Department of Health and Human Services, Bureau of Health Planning.

6. Under authority allowed by the 1981 reconciliation act, the Secretary of Health and Human Resources recently waived requirements for a review of the appropriateness of existing services, review of proposed use of federal funds (in which HSAs make recommendations to ensure that federal grant money --for community health centers, for example--is spent in compliance with the local health plan), and publication of hospital charges.

advocate investments in needed services by working with providers and by presenting evidence of the need to financers of health services development. Agencies vary greatly in their activities, with reported successes for programs to educate the public about health-care costs and health promotion, recruit health manpower in underserved areas, assist in developing Health Maintenance Organizations (HMOs), encourage the development of alcohol and drug abuse programs, and stimulate price competition by publishing physician fees.

HSA Membership. HSA decisions are made by a governing board, which obtains technical assistance from a professional staff. Half the board members must be appointed from outside the HSA--usually by public officials and local health interest groups. The board must also meet federal requirements for a mix of consumer and provider representatives. Consumer representatives must comprise between 51 and 60 percent of the board, and must be representative of the HSA population, based on factors such as age, race, income, and handicapped status.

In the aggregate, planning agency governing boards appear to mirror the national population, but this does not mean that all individual HSA boards are representative of their local populations. There are about 9,000 board members, of which fifty-three percent are classified as consumers. Of these, 55 percent are women, a slight over-representation compared to the national population. Nonwhites are also slightly overrepresented in the aggregate--78 percent of board members are white, 14 percent are black, and 4 percent are hispanic. Forty-two percent have family incomes between $10,000 and $25,000.

Some HSAs have expanded consumer representation to include more direct citizen participation in planning activities. For example, subarea councils were often established to learn which health issues concern citizens. These councils had about 14,000 members in 1980, but many have been disbanded as a result of recent cuts in HSA funding.

Grants for HSAs. Federal grants to HSAs are awarded on the basis of population, up to a ceiling of $3.75 million per HSA. The minimum grant level was lowered from $260,000 to $100,000 in the 1981 reconciliation act. The act also changed the restrictions on the use of nonfederal funds by allowing health insurers to make financial contributions to HSAs.

## State Health Planning and Development Agencies (SHPDAs)

Unlike HSAs, which are independent organizations, SHPDAs are state government agencies, chosen by the governors to prepare and implement state health plans based on those of the states' HSAs, and to make final CON review decisions, considering recommendations of the HSAs. In most states, the governor has selected the state health department to fulfill this role. These agencies also prepare an annual inventory of state medical facilities and administer federal loans for health facilities development, the former Hill-Burton program.

The other statewide planning agencies required by the 1974 act are the State Health Coordinating Councils (SHCC), whose members are appointed by the governor. These councils both review HSA health plans and have final approval of state health plans proposed by the SHPDA. The councils also review HSA budgets and state applications for federal health grant money.

Grants for SHPDAs are based on state population, with federal funds covering up to 75 percent of operating costs. In some states that operated CON review programs prior to passage of the federal planning act, much of the federal share has been used for data gathering and development of the state health plans rather than for CON review.

## CON REVIEW

The 1974 act provided planning agencies with a regulatory tool by requiring that all states eventually enact CON review legislation. This legislation requires that, in order to be licensed, health facilities must receive prior approval for construction and certain other projects. Between 1964 and 1974, 24 states already had passed CON legislation to regulate hospital capital investment (see Table 2). Currently, all states except Louisiana have CON programs. In 1979, about 90 percent of all new construction, 25 percent of equipment purchases, and 60 percent of building modernization expenditures were subject to CON review.[7]

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7. ICF, Inc. An Analysis of Programs to Limit Hospital Capital Expenditures, Final Report (Washington, D.C., June 30, 1980), p. 26.

TABLE 2. STATES WITH CERTIFICATE OF NEED (CON) LAWS OR SECTION 1122 AGREEMENTS,[a] BY YEAR OF ENACTMENT

| State | Year of CON Enactment | Year of Section 1122 Agreement |
|---|---|---|
| Alabama | 1977[b] | 1973-1980 |
| Alaska | 1976[b] | 1974-1981 |
| Arizona | 1971[c] | --- |
| Arkansas | 1975[d] | 1973-present |
| California | 1969[c] | --- |
| Colorado | 1973[b] | 1974-1979 |
| Connecticut | 1969[b] | --- |
| Delaware | 1978[b] | 1973-present |
| Florida | 1972[b] | 1973-1978 |
| Georgia | 1974[c] | 1974-present |
| Hawaii | 1974[d] | 1973-1977 |
| Idaho | 1980[c] | 1974-1980 |
| Illinois | 1974[b] | --- |
| Indiana | 1980[c] | 1973-present |
| Iowa | 1977[b] | 1973-present |
| Kansas | 1972[d] | --- |
| Kentucky | 1972[d] | 1974-present |
| Louisiana | no law | 1973-present |
| Maine | 1978[b] | 1973-present |
| Maryland | 1968[b] | 1974-1978 |
| Massachusetts | 1971[b] | --- |
| Michigan | 1972[b] | 1973-present |
| Minnesota | 1971[b] | 1974-present |
| Mississippi | 1979[d] | 1976-1981 |
| Missouri | 1979[c] | 1979-1981 |
| Montana | 1975[b] | 1974-1980 |
| Nebraska | 1979[b] | 1973-present |
| Nevada | 1971[b] | 1974-1980 |
| New Hampshire | 1979[b] | 1973-1979 |
| New Jersey | 1971[d] | 1974-present |
| New Mexico | 1978[d] | 1973-present |
| New York | 1964[b] | 1974-1979 |
| North Carolina | 1978[b] | 1973-1982 |
| North Dakota | 1971[b] | 1974-1981 |
| Ohio | 1975[c] | 1974-1978 |
| Oklahoma | 1971[d] | 1974-present |
| Oregon | 1971[c] | 1974-1979 |

(Continued)

TABLE 2. (Continued)

| State | Year of CON Enactment | Year of Section 1122 Agreement |
|---|---|---|
| Pennsylvania | 1979[c] | 1973-1981 |
| Rhode Island | 1968[d] | --- |
| South Carolina | 1971[b] | 1974-1981 |
| South Dakota | 1972[b] | --- |
| Tennessee | 1973[b] | --- |
| Texas | 1975[b] | --- |
| Utah | 1979[d] | 1975-1979 |
| Vermont | 1979[b] | 1975-1979 |
| Virginia | 1973[b] | 1973-1978 |
| Washington | 1971[d] | 1974-1980 |
| West Virginia | 1977[d] | 1974-present |
| Wisconsin | 1977[b] | 1973-1978 |
| Wyoming | 1977[b] | 1974-1979 |

SOURCE: Department of Health and Human Services, Bureau of Health Planning, data supplied to CBO.

a. See text below for discussion of Section 1122 review.

b. In conformance with the 1974 act only.

c. Not in conformance with federal requirements under either the National Health Planning and Resources Development Act of 1974 or the 1979 amendments.

d. In conformance with both the 1974 act and the 1979 amendments.

The requirement for CON review followed enactment of a similar program for Medicare and Medicaid. Section 1122 of the Social Security Amendments of 1972 authorizes the Secretary of Health and Human Services to enter into voluntary agreements with states to review proposed hospital capital expenditures. Hospitals proceeding with disallowed projects are denied interest and depreciation reimbursement under Medicare, Medicaid, and the Maternal and Child Health programs.

Although these programs are similar, the constraint imposed by CON review is, in theory, stronger than that of Section 1122 review and most states currently operate only CON review (see Table 2). First, CON review requires prior approval for licensure whereas Section 1122 review disallows federal funds only when an application is disapproved; if no action is taken, reimbursement must be granted. Second, Section 1122 review is important only to those hospitals with a relatively large proportion of patients who receive federal health benefits, whereas licensure applies to all facilities. Finally, the sanction associated with Section 1122 review applies only to depreciation and interest reimbursement, while failure to comply with CON review can lead to loss of the facility's operating license.

Some states, however, preferred Section 1122 review to CON review. These states thought licensure denial was too drastic a measure to invoke against a hospital that proceeded with a disapproved project. Because of Section 1122's less stringent sanctions, boards might be more likely to disapprove projects under this program.

## Federal Requirements for CON Review

The federal law requires that CON programs conform to federal regulations regarding the kinds of facilities covered, the types of projects subject to review, and the review process. CON approval is required for private, public, and psychiatric hospitals; nursing homes; ambulatory surgical centers; and rehabilitation facilities. Review is mandated for projects with capital expenditures over $600,000, equipment purchases over $400,000, and new services generating annual operating costs of $250,000 or more.[8] CON legislation must also apply to the acquistion of existing facilities if changes will be made in the number of beds or services.

Most states are not yet in compliance with all federal requirements, however, and the types of facilities and expenditures

8. These thresholds were raised in the Omnibus Budget Reconciliation Act of 1981 from $150,000 for equipment and capital and $75,000 for operating costs.

covered by CON laws vary among states.[9] There does not appear to be any single barrier to compliance. States differ in the threshold they set for projects requiring review and in the administrative process of review--for example, the number of agencies involved in review. In addition, most state laws include "grandfather" clauses, which exclude certain projects from review in the early years of enactment.

Finally, the 1974 planning act, as amended, designates a series of criteria to be applied by planning agencies in review of CON applications. These criteria are in keeping with the national health priorities and include the relationship of the proposal to the health plan, the availability of cost-effective alternatives, and the potential effects of the project on quality, access, costs, and competition. In order to promote competition, the 1979 amendments require that HMOs, which have been shown to use fewer hospital services, must be exempt from CON review under certain conditions.[10]

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9. As of October 1981 only 12 states were in full compliance. Another 28 states are in compliance with the 1974 act, but not the 1979 Amendments (see Table 2). For most states the deadline for compliance was January 1982, but the date for applying penalties was recently extended to January 1983. At that time, states not in compliance can lose funds for various health programs, including manpower training and mental health programs.

10. Inpatient facilities controlled or leased by an HMO are exempt if three-quarters of the facility users are enrollees.



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## CHAPTER III. THE EFFECTIVENESS OF HEALTH PLANNING AND PROGRAM PROBLEMS

The first section of this chapter analyzes evidence of the effectiveness of the current health planning program by examining the results of studies of certificate of need (CON) review. The second section discusses problems with the health planning program. Some of these could be ameliorated through changes in the present program. Other, more general, problems would be more difficult to solve through program changes.

### THE EFFECTIVENESS OF THE HEALTH PLANNING PROGRAM

Although the 1974 planning act specifies numerous goals, cost containment has been the focus of most health planning evaluations for three reasons. First, rising hospital costs have been an issue of major importance to the federal government in recent years, particularly concerning the level of Medicare and Medicaid outlays for hospital care. Second, the success of health planning in meeting the cost-containment goal is relatively easy to measure by statistics such as growth in the number of hospital beds, total hospital expenditures, and use of hospital services.[1] The effect of planning agencies on other goals, such as improving the quality of care and shifting investments toward needed services, usually cannot be determined, because the results themselves are difficult to measure and because the effects of planning are difficult to separate from those of other factors, such as improved insurance coverage and advances in medical treatment. Finally, because CON review--the major cost-containment tool available to planning agencies--existed in many states prior to passage of the 1974

1. The major evaluations of CON review have focused exclusively on short-term stay general hospitals. The effects of CON review on other health facilities has not been examined to the same degree. One study, however, presented some evidence from case studies that states have used CON review to limit growth in the supply of nursing home beds to contain Medicaid costs. See Judith Feder and William Scanlon, "Regulating the Bed Supply in Nursing Homes," Milbank Memorial Fund Quarterly (Winter 1980), pp. 54-88.

planning act, there has been more time for evaluation of this program than for other activities of planning agencies.

Econometric studies of CON review have attempted to measure differences in hospital investment and costs in states before and after enactment, and differences between states with and without such programs. The studies that examined interstate variations attempted to account for other differences that might affect hospital expenditures, including population, supply of physicians, construction costs, the number of health facilities, and other cost-containment programs, such as Section 1122 review and state rate regulation.

## Effects of State CON Review on Cost-Containment Goals

Although available evidence does not support the hypothesis that CON review has limited growth in hospital costs, total investment, the number of hospital beds, or hospital use, these results must be interpreted with caution. First, the studies do not directly evaluate the federal program, because most of the CON experience studied reflects investment decisions made prior to its implementation. Funding for Health Systems Agencies (HSAs) and state agencies did not begin until fiscal year 1976, and in the first few years most resources were spent in staffing agencies, selecting governing boards, and developing the initial health plan. In addition, federal guidelines for CON review decisions were not final until April 1978. Furthermore, many projects completed in the early years of a CON program were not subject to review because of long lead times in hospital construction and grandfather clauses in many state laws which excluded certain projects from review.

The federal planning program may have led to improvements in state CON programs that would not have been measured in these studies. Federal requirements and financial resources may have strengthened state CON review programs. For example, the data collection and technical assistance provided by state and local health plans may have improved CON decisionmaking and increased agency effectiveness.

Second, these results do not rule out the possibility that a few individual state programs have been effective. Because of difficulties in measuring differences among programs, any effects are averaged over all CON states, so that any successes in states

that were more active in attempting to contain costs could have been diluted by the absence of effects in other states.

Third, the studies also have technical limitations. One problem is that during the years covered by the studies many of the states that did not have CON review--the control group--had Section 1122 agreements. To the extent that Section 1122 programs were effective, the studies would have understated CON effectiveness. Many consider Section 1122 review to be a relatively weak program, however. Other problems relate to the measurement of hospital investment and costs. Finally, each study also has limitations specific to its own data and methodology that are discussed in Appendix B.

Of the numerous studies evaluating the effects of CON review on hospital investment and costs, two dominate discussion because of the time period covered, the quality of the data used, or the comprehensiveness of the analysis. They are the studies by Frank Sloan of Vanderbilt University, and Policy Analysis, Inc. and Urban Systems Engineering.[2] These studies are highlighted in the following discussion, but results from others are noted where appropriate. Appendix B presents more details of these studies.

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2. Frank A. Sloan, "Regulation and the Rising Cost of Hospital Care," Review of Economics and Statistics (November 1981), pp. 479-487; Policy Analysis, Inc., and Urban Systems Research and Engineering, Inc., Evaluation of the Effects of Certificate of Need Programs (prepared for the Bureau of Health Planning and Resources Development, August 1980). Although the study by Policy Analysis has been criticized, another study using essentially the same data had similar results. See Frank A. Sloan and Bruce Steinwald, "Effects of Regulation on Hospital Costs and Input Use," Journal of Law and Economics (April 1980), pp. 81-109. The Policy Analysis study is used here because it is more comprehensive and has an additional year of data. A study by David S. Salkever and Thomas A. Bice, Hospital Certificate-of-Need Controls: Impact on Investment, Costs, and Use (Washington, D.C.: American Enterprise Institute, 1979), is widely discussed elsewhere, but not in the body of this report, because the data used were for the very early years of CON review, 1968-1972. It is discussed in Appendix B.

Effects of CON Review on Hospital Costs. There is no evidence that CON review has limited the growth in hospital unit costs.[3] The hypothesis that CON review constrains hospital costs was tested in both of the major studies discussed above, as well as several others using various types of data and definitions of CON activity. These studies examined the effects of CON review on various measures of expenses per admission and expenses per patient day.

A problem with using unit cost measures is that the growth in costs associated with increased hospital beds would not be accounted for in these studies. Preventing the so-called "Roemer effect" of increased use resulting from additional beds is the primary means by which CON review attempts to control growth in hospital costs.[4]

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3. One study suggested that when CON approval was linked to Blue Cross reimbursement, costs per admission were slightly lower. The Blue Cross program in these areas is similar to Section 1122 review. See Frank A. Sloan and Bruce Steinwald, "Effects of Regulation on Hospital Costs and Input Use," p. 99.

   A study by Gerard Anderson, "Variations in Per Capita Community Hospital Expenditures, 1978" (unpublished) has been used as evidence that CON review has constrained costs. The CON variable was used only as a control variable, however, and the author did not intend his work to be a test of the effects of CON review. The data used were at the HSA level, but were only for one year, and therefore cannot show changes because of the implementation of CON.

4. A study that examined growth in hospital costs per capita, which is a better test of the effects of CON review than the unit cost variables used in other studies, had somewhat encouraging results, although the measure of CON review used makes them inconclusive. This study was primarily an analysis of state hospital rate-setting programs, but included measures of individual state CON review programs. The results varied widely, but, in general, CON review appeared more successful in restraining growth in costs per capita than costs adjusted for admissions or patient days. The individual state CON programs showing effects varied across

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Results from a recent study suggest that, although CON review does not appear effective in slowing the growth of hospital costs when measured alone, it may be effective in conjunction with other regulatory programs. This study found that those states with a strong commitment to cost containment have been successful in restraining growth of per diem hospital costs.[5] The study analyzed interaction effects in states with several stringent regulatory programs, including CON review, Section 1122 review, hospital rate review, and Blue Cross requirements for hospital conformance with CON or 1122 review.

Effects of CON Review on Hospital Use. Although CON review would be expected to limit the growth in hospital use by restricting the availability of beds and services, the one study that tested for such an effect did not find one.[6] An earlier study found that CON review had reduced hospital use, but because the data covered only very early years of CON review, the results are not conclusive.[7]

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4. (Continued)
equations, however, which makes the results difficult to interpret. See Craig Coelen and Daniel Sullivan, "An Analysis of the Effects of Prospective Reimbursement Programs on Hospital Expenditures" Health Care Financing Review (Winter 1981), pp. 1-40.

5. Nicole Urban and Thomas W. Bice, "Measuring Regulation and its Effects on Hospital Behavior" (University of Washington, September 1981, unpublished).

6. Frank A. Sloan, "Regulation and the Rising Cost of Hospital Care," p. 486. A study using data for the years 1975-1979 found CON review had no effect on growth in adjusted patient days. See Paul L. Joskow, Controlling Hospital Costs: The Role of Government Regulation (Cambridge, Massachusetts: MIT Press, 1981), p. 160.

7. This study found that from 1968 to 1972, CON review programs reduced patient days between 2.5 and 9 percent. Long lead times in hospital construction and grandfather clauses in many CON laws make these results from the early years of CON review questionable, however. See David S. Salkever and Thomas A. Bice, Hospital Certificate-of-Need Controls, p. 69.

Effects of CON Review on Capital Expenditures. CON review does not appear to have restrained growth in total hospital investment or the number of hospital beds.[8] The effect on hospital investment was examined in both of the major studies discussed earlier. Growth in total assets, net plant assets, and assets per bed were employed as measures of investment.[9]

Two problems result from the measures of investment used in these studies. First, using the change in assets as a measure of investment can underestimate or overestimate true investment. The inclusion of depreciation in asset data can underestimate hospital investment. If capital is written off at a rate faster than its true decline in usefulness, the total change in net plant assets will appear lower than it would if the level of operating capital were being measured. Donations and other increases in hospital assets can overestimate investment. If these funds are not used to increase operating capital, the increase in net plant assets overestimates the additional resources available for operating hospital services. A second problem in the measurement of investment is that widely acknowledged errors in the asset data used in these studies reduces the likelihood of finding small effects on investment, although the results would not be biased.

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8. Case studies have suggested that CON review has constrained hospital investments in some states. For example, a study of the Massachusetts program suggested that CON review had reduced the rate of hospital investment as measured by gross building and equipment assets per bed. The study found that those hospitals that had a relatively greater number of proposed investment expenditures denied by or withdrawn from CON review had relatively lower rates of actual investment, but the magnitude of the difference was small. The result is weak because it was based only on data measuring actual investment for one year, although the CON variable covered a four-year period. In addition, the study assumed that all project withdrawals were a direct result of CON review, which might not have been the case. See Alvin Eugene Headen, Jr., "Measuring the Effect of Economic Regulation: Certificate of Need Regulation of Hospitals in Massachusetts 1972-1978" (Ph.D. dissertation, Massachusetts Institute of Technology, 1981).

9. Policy Analysis, Inc. Evaluation of the Effects, vol. II, pp. 97-143; and Frank A. Sloan "Regulation and the Rising Costs of Hospital Care," unpublished version.